

JAWAPAN PEPERIKSAAN PERCUBAAN SPM KERTAS 2 SMK SAN MIN

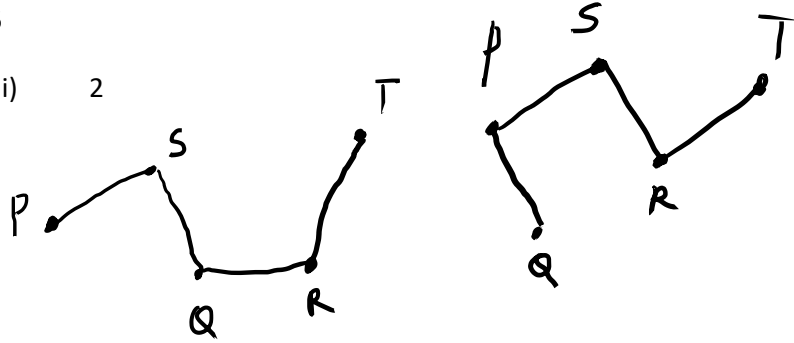
J1) 6, 5

(a)

(i) 2

(b)

(ii)



2(a) If  $\sin \theta = \cos \theta$ , then  $\theta = 45^\circ$ .

b)  $x \leq y$

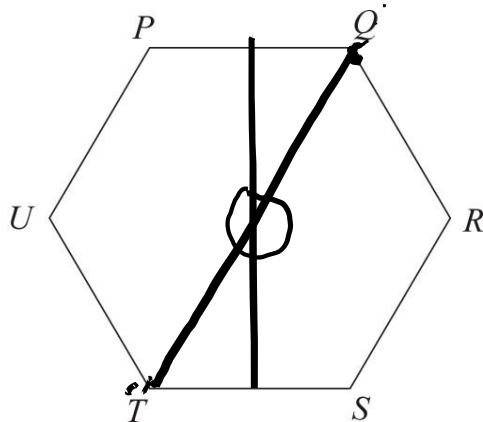
c)  $4n^2 - n$ ,  $n = 1, 2, 3, 4, \dots$

3)  $6.5/100 \times 6000$

$6000 (1.20 - 1.00)$

$390 + 1200 = 1590$

4)



5)  $\text{CRA} = 63.43^\circ$

$X = 116.57^\circ, 296.57^\circ$

6) 615

7)  $59000/1000 \times 26 = 1534$

$305.50 + 1534$

$0.3 \times 1839.50$

$1839.50 - (0.3 \times 1839.50) = 1287.65$

8a) 2

b)  $180/(t-4) = 95$

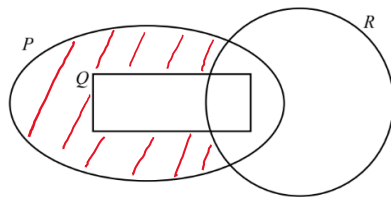
$t = 6$

c)  $500/8 = 62.5$

9)  $(x+1)(x-4) = 24$

Perimeter = 22 cm

10) 1 kg shrimp is RM 5, 1 kg squid RM 4



11) ai)

Bi)  $K = \{3, 5, 7, 9, 11, 13, 15, 17, 19\}$

$L = \{3, 5, 7, 11, 13, 17, 19\}$

$M = \{4, 5, 8, 10, 20\}$

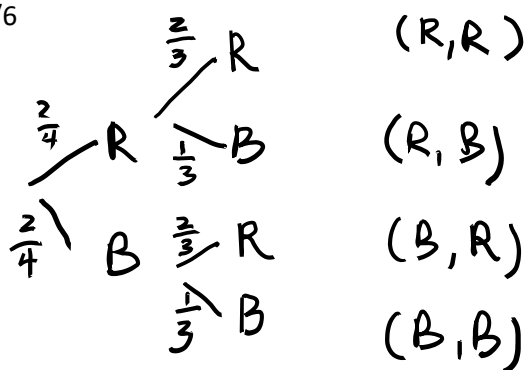
ii)  $\{4, 8, 9, 10, 15, 20\}$

12)a i)  $\frac{1}{2}$

ii)  $\frac{1}{3}$

iii)  $\frac{5}{6}$

bi)



ii)  $1 - (2/4 \times 1/3) = 5/6$

13ai) Enlargement with scale factor 2 at center (9,2)

ii) Translation  $\begin{Bmatrix} 4 \\ -4 \end{Bmatrix}$

b) Enlargement with scale factor 2 at center ( 1,10)

c)  $10 = 2^2 \times \text{Area of J}$

Area of J = 2.5 unit<sup>2</sup>

14a)

| Income and Expenditure                                  | RM   |  |
|---------------------------------------------------------|------|--|
| <b>net income :</b>                                     |      |  |
| net salary                                              | 4200 |  |
| passive income                                          | 0    |  |
| <b>total monthly income</b>                             | 4200 |  |
| minus fixed monthly savings (10% of the monthly income) | 420  |  |
| minus savings for emergency fund                        | 250  |  |
| <b>income balance</b>                                   | 3530 |  |
| <b>minus monthly fixed expenses:</b>                    |      |  |
| Personal insurance                                      | 85   |  |
| Car loan payment                                        | 550  |  |
| House rent                                              | 600  |  |
| <b>total monthly fixed expenses</b>                     | 1235 |  |
| <b>minus monthly variable expenses:</b>                 |      |  |
| Food                                                    | 1050 |  |
| Water, electricity and telephone bill                   | 270  |  |
| Gas dan petrol                                          | 120  |  |
| Groceries                                               | 50   |  |
| <b>total monthly variable expenses</b>                  | 1490 |  |
| <b>surplus of income</b>                                | 805  |  |

b) Yes, monthly surplus RM 805 more than RM 283.33

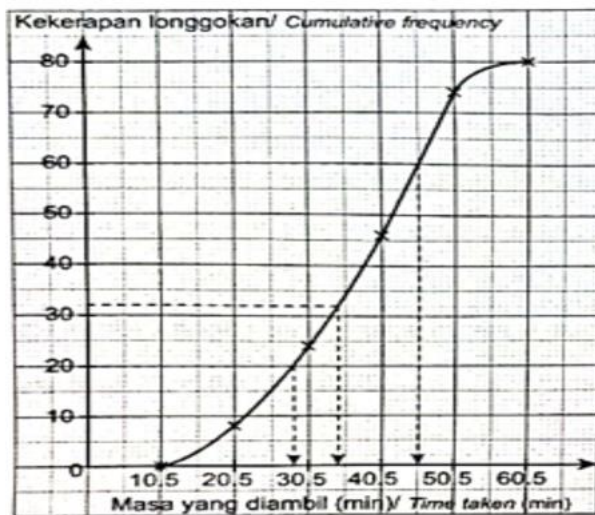
15) a ) standard deviation

b) mean= 8.975      standard deviation = 0.8333

c) B is more consistent, standard deviation B , 0.7106 is less than standard deviation A 0.8333

16ai)

| Upper boundary | Cumulative frequency |
|----------------|----------------------|
| 10.5           | 0                    |
| 20.5           | 8                    |
| 30.5           | 24                   |
| 40.5           | 46                   |
| 50.5           | 74                   |
| 60.5           | 80                   |



ii)

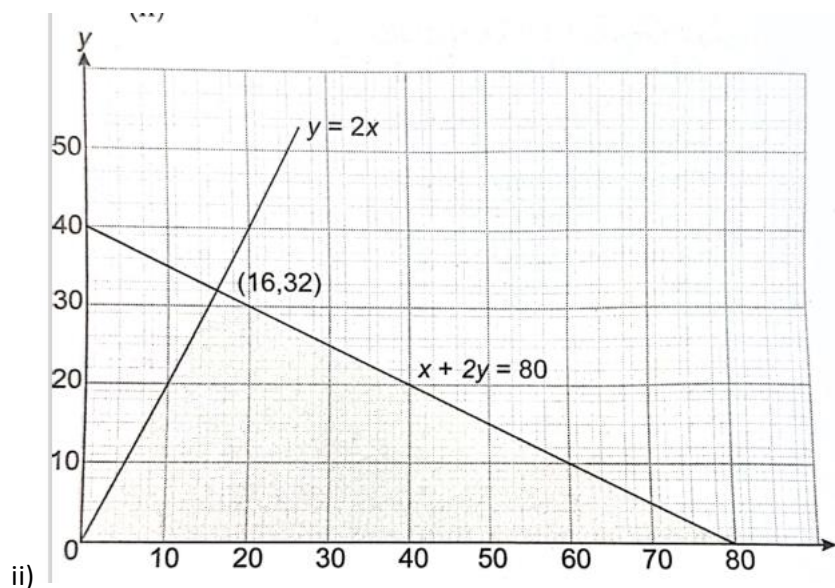
iii)  $P_{40} = 34.5$

b)  $\frac{3}{5} + \frac{1}{5} - (\frac{3}{5} \times \frac{1}{5}) = \frac{17}{25}$

c)  $8y + 10x = 212$ ,  $y + 5 = x$

$x = 14$ ,  $y = 9$

17 a i)  $y \leq 2x$ ,  $x + 2y \leq 80$



ii)

bi)  $10 \leq x \leq 40$

ii) MAX POINT ( 16, 32)

$$(16 \times 4) + (32 \times 11.50) = \text{RM } 432$$

III) NO, ( 50, 20 ) lies outside the shaded region.

c) let  $x$  be the width and  $y$  be the length of the cloth

$$2x + 2y = 112$$

$$y = \frac{4}{3}x$$

$$x = 24, y = 32$$

$$\text{Area} = 24 \times 32 = 768 \text{ cm}^2$$